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Analyzing Gojek service quality and customer satisfaction using Servqual–Canoe Model–QFD integration

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ABSTRACT

The problem at the Untirta Faculty of Engineering concerning Go-ride services is a decrease in Go-ride users from 2020 to 2022. This decline is due to users' complaints about unsatisfactory Go-ride services, such as drivers being unfriendly and impolite, among other issues. Based on the challenges faced by Gojek, a study was conducted on service quality using the Servqual, Canoe, and Quality Function Development (QFD) methods. This study aims to identify attributes that fail to meet customer expectations, determine priority attributes for improvement, and prioritize improvement efforts that the company can undertake to enhance the quality of Go-ride services. Questionnaires were distributed to 97 respondents. The research findings revealed 8 attributes with a negative gap. The priority attribute requiring improvement is drivers consistently being friendly and polite to customers, with an adjusted importance value of 5.46. Furthermore, the suggested improvement that the company can pursue is to reward drivers who consistently adhere to the standard operating procedures (SOP), with a relative weight percent value of 51.03%. In conclusion, there are 8 customer needs that still do not meet expectations, with the priority being drivers' consistent friendliness and politeness. The suggested priority improvement for the company involves rewarding drivers who consistently adhere to SOP.

1. Introduction

Transportation is an essential means of supporting human activities in carrying out daily routines. Society relies heavily on transportation because it can shorten travel time. The use of motor vehicles in Cilegon City has the highest number compared to other types of vehicles such as cars, buses, and trucks. According to data obtained from BPS Cilegon City, the number of motor vehicles in 2022 was 172.058, cars were 37.667, buses were 606, and trucks were 10.411 [1]. The use of motor vehicles by the community is not only for individual needs but is also utilized as a business opportunity in the transportation service, such as motorcycle taxi services (ojek). The development of motorcycle taxi services has expanded beyond conventional means, incorporating technological advancements to offer online services. One of the prominent companies in the online transportation service industry is Gojek. Gojek was the pioneer of the online transportation business, founded in Indonesia in 2010, followed by other companies such as Grab, Uber, Maxim, Indriver, and others.

The existence of online transportation services today has led to a significant dependence on them among the public, as users can easily book rides through mobile applications, thereby reducing travel time. The intense competition among online transportation companies has driven each of them to enhance the quality of their services to ensure customer satisfaction and foster loyalty among consumers [2]. The presence of online motorcycle taxis is an alternative for the community, including students, to travel. Students are one of the main user segments of online motorcycle taxis. The presence of online ojek has a significant impact on student life by speeding up and simplifying the transportation process and daily needs. Students can easily order ojek to go to campus or travel to other places.

FT Untirta is one of the state universities located in Cilegon City. FT Untirta students are mostly users of online motorcycle taxi services. Based on the survey results with FT Untirta students regarding the use of online motorcycle taxi services that have been carried out, the results can be seen in Fig. 1 that illustrates a noticeable 32% decline in Gojek users from 2020 to 2022.

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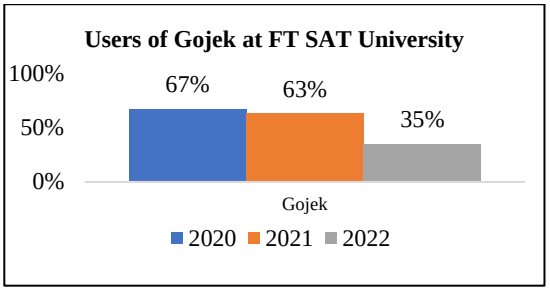

Figure 1. Graph of Gojek users at FT Untirta

Subsequent field observations identified several customer complaints that contributed to this decline, pointing towards dissatisfaction with the services and facilities provided by Gojek. The preliminary survey revealed various customer grievances, notably dissatisfaction with specific service aspects: (1) drivers' lack of familiarity with road routes accounted for 27.7% of complaints, (2) ynfriendly behavior from drivers constituted 19.3% of the complaints, (3) lack of responsiveness from drivers to orders accounted for 18.1%, (4) incomplete attributes worn by Gojek drivers contributed to 15.7% of the complaints, (5) other miscellaneous issues were reported at 19.2%. These customer insights highlight the existing service gaps within Gojek. To achieve customer satisfaction, concerted efforts are necessary to enhance the quality of Gojek services.

This research aims to address the challenges faced by Gojek by identifying priority attributes that require improvement and proposing corresponding enhancement efforts. The study integrates the Servqual, Canoe model, and QFD methodologies. The research begins with Servqual mapping, which assesses the disparity between consumer expectations and perceptions of services [3]. Servqual categorizes service attributes into five dimensions—responsiveness, assurance, tangibles, empathy, and reliability—according to Parasuraman [4]. Using a structured questionnaire, this method measures the gap between customer expectations and actual service delivery. Attributes are then prioritized for improvement using the Canoe model.

The integration of Servqual and the Canoe model identifies key attributes requiring enhancement. The QFD methodology translates consumer preferences into a House of Quality (HoQ) matrix, evaluating service improvements and providing a blueprint for action [5]. The outcome of this research is a proposal outlining improvement initiatives that Gojek can implement to elevate service quality. These chosen methodologies offer clear tools to evaluate service quality as perceived by consumers and to align services with their expectations. Their integration can significantly contribute to enhancing service quality within the Gojek company.

2. Material and method

This research was conducted within Gojek, focusing on a case study at the Faculty of Engineering, Untirta, involving student respondents who were regular users of Go-Ride services, with a minimum requirement of two service usages.

The study employs an integration approach using Servqual, Canoe, and QFD methodologies. It commences with Servqual to assess the disparity between consumer expectations and perceptions of services. Subsequently, Servqual attributes are classified to gauge their efficacy in meeting consumer needs, identifying the priority attributes for enhancement. The Canoe model is then applied by Gojek to improve these identified attributes. The integration of Servqual and the Canoe model generates a list of priority attributes for enhancement. Finally, QFD is utilized to translate consumer preferences into a House of Quality (HoQ) matrix, providing an evaluative framework for service improvements [6].

The data processing stages in this study are outlined as follows [7].

1. Data Collection. This involves gathering information on the number of active students from the 2019-2022 batch at FT SAT University.
2. Population Determination. The study's population comprises active students at FT SAT University. The sample selection utilizes the Slovin formula, focusing on students who have used Go-Ride services at least twice.
3. Questionnaire Preparation. Development of Servqual and Canoe questionnaires consisting of 15 attribute-related statements.
4. Questionnaire Distribution. Dispersion of Servqual and Canoe questionnaires among the selected sample.
5. Data Validation. Statistical tests for validity and reliability are conducted on the collected data using Microsoft Excel and SPSS to confirm its accuracy and consistency.
6. Servqual Gap Calculation. Calculation of the Servqual gap involves averaging the expectation and perception scores obtained from the Servqual questionnaire. The gap is computed using Eq. (1).

$$Q = P(\textit{Perception score}) - E(\textit{Expectation score}) \quad (1)$$

A negative gap value implies that the service quality falls short of customer expectations, while a positive gap value indicates that customer expectations are met.

7. Canoe Questionnaire Processing. Each attribute is categorized using the Canoe evaluation table.

Table 1.
Canoe evaluation table

Customer Requirement		Dysfunctional				
		1	2	3	4	5
Functional	1	Q	A	A	A	O
	2	R	I	I	I	M
	3	R	I	I	I	M
	4	R	I	I	I	M
	5	R	R	R	R	Q

Description: Q = Questionable, A = Attractive, R = Reverse, O = One Dimensional. I = Indifferent, M = Must Be

The questionnaire that obtained respondents' answers from each question that had been asked, then determined the number of Canoe categories using Blauth's formula as follows [6].

1. If (O+A+M) > (I+R+Q), then grade from the maximum of (O, A, M).
2. If (O+A+M) < (I+R+Q), then grade from the maximum of (I, R, Q).
3. If (O+A+M) = (I+R+Q), then the grade is the maximum of all categories.

Then create a Canoe quadrant by calculating the satisfaction and dissatisfaction of each attribute using Eq. (2) and (3).

$$\text{Extent of Satisfaction} = \frac{A+O}{A+O+M+I} \quad (2)$$

$$\text{Extent of Dissatisfaction} = -\frac{O+M}{A+O+M+I} \quad (3)$$

8. The next stage is to calculate the integration of Servqual and Canoe. Starting with setting the Canoe weight on each attribute used for consideration in adjusting to the Canoe weight value (A = 4, O = 2, M = 1 and I. R, Q = 0). Then calculate the adjusted importance ratio value and adjusted importance with Eqs. (4) and (5). The next stage determines the priority of the improved attributes. If the attribute has a weakness grade and Canoe must-be, one-dimensional and attractive categories, then the attribute will be improved, while if the attribute has a strong grade and Canoe indifferent category, then the attribute will be maintained.
9. Creation of House of Quality (HoQ).
   The steps in preparing HoQ are as follows :
   a. Determination of the "Whats" matrix
   Compilation of voice of customers containing customer needs obtained from the integration of Servqual and Canoe which fall into the category to be improved.
   b. Determination of the "Hows" matrix
   Determination of the technical requirements of the priority attributes that want to improve their quality. These technical requirements are obtained from the results of brainstorming with the company.
   c. Determination of technical correlation
   Determination of the relationship between technical requirements is done by seeing whether the technical requirements with each other have a strong, moderate, or weak relationship and this relationship have is expressed by symbols.
   d. Determination of relationship
   Determination of the relationship between attributes and technical responses, whether the relationship is strong, moderate, or weak, this relationship is expressed by symbols.
   e. Calculation of planning matrix
   The next stage is carried out to calculate the importance ratio value, absolute weight value and absolute weight percent value using Eqs. (6), (7), and (8).
   f. Calculation of technical matrix
   The next stage is to calculate the relative weight value and relative weight percent value using Eqs. (9) and (10).
   g. Determination of benchmarking
   The next stage is determining benchmarking. Companies that compete with Gojek are Grab and Maxim.

$$\text{Improvement Ratio}_{\text{Adj}} = \left(\frac{\text{Level of expectation}}{\text{Level of perception}}\right)^{\frac{1}{\text{Canoee Weight}}} \quad (4)$$

$$\text{Adjusted Importance} = \text{Level of Importance x Improve Ratio}_{\text{Adj}} \quad (5)$$

$$\text{IR} = \frac{\text{Target Value}}{\text{Customer Satisfaction Performance}} \quad (6)$$

$$\text{Absolute Weight} = \text{Importance to Customer x IR x SP} \quad (7)$$

$$\text{Absolute Weight Percent} = \frac{\text{Absolute Weight}}{\sum \text{Absolute Weight}} \text{ x } 100\% \quad (8)$$

$$\text{Relative Weight} = \Sigma(\text{Absolute Weight x Numeric Value}) \quad (9)$$

$$\text{Relative Weight Percent} = \frac{\text{Relative Weight}}{\Sigma \text{ Relative Weight}} \quad (10)$$

3. Results and discussions

The data processing in this study involved sample calculation, Servqual gap calculation, creation of Canoe quadrants, and development of the House of Quality (HoQ) [8].

3.1. *Sample determination*

This study uses data collection techniques, namely purposive sampling. The criteria for respondents who filled out the questionnaire were FT Untirta students as Go-ride users who had used the service more than 2 times. The population of FT Untirta students is 3110 people. Then an error rate of 10% is used. To determine the required sample, use Slovin formula calculation resulting 97 respondents.

3.2. *Preparing the questionnaire*

The questionnaires used are Servqual and Canoe questionnaires. Table 2 presents 15 attributes that have been classified based on Servqual dimensions. The results of the Servqual questionnaire which contains the average perception data, expectations and interests of each attribute are presented in Table 3.

3.3. *Validity test*

Validity testing was carried out on the first 30 data. If $r_{count} > r_{table}$ then the data is declared valid [9]. In this study using a significance level of 5% and with n = 30, maka r_{table} = 0,361. The validity test results obtained are valid perception data, interest expectations, and functional data and dysfunctional data are valid because $r_{count} > r_{table}$.

Table 2.
Servqual customer requirement identification

No	Attribute Code	Service Attribute
		Responsiveness Dimension
1	Res_1	Drivers are responsive to customer complaints
2	Res_2	Drivers are responsive to customer orders and requests
3	Res_3	The company provides rates that are appropriate to the distance and affordable
		Assurance Dimension
4	As_1	Drivers prioritize gojek user safety
5	As_2	Drivers are honest and trustworthy
		Tangibility Dimension
6	Tg_1	Drivers use proper motorcycles
7	Tg_2	Drivers look neat, clean and smell good
8	Tg_3	Drivers use complete driving attributes
		Emphaty Dimension
9	Em_1	Drivers are always friendly and polite to customers
10	Em_2	Drivers offer facilities to customers (helmets, masks, raincoats)
11	Em_3	Drivers care about customer requests.
		Reliability Dimension
12	Rel_1	Drivers pick up and drop off customers on time.
13	Rel_2	The driver delivers to the intended location through the best route.
14	Rel_3	The driver drives the vehicle well.
15	Rel_4	Drivers always obey traffic rules.

Table 3.
Results of Servqual questionnaire

Attribute Code	Level of Perception	Level of Expectation	Level of Importance
Res_1	4,12	4,45	4,60
Res_2	4,06	4,34	4,58
Res_3	4,25	4,48	4,56
As_1	4,56	4,37	4,47
As_2	4,55	4,31	4,52
Tg_1	4,03	4,37	4,62
Tg_2	4,46	4,40	4,53
Tg_3	4,11	4,45	4,65
Em_1	4,00	4,56	4,79
Em_2	3,70	4,06	4,66
Em_3	4,24	4,21	4,26
Rel_1	4,44	4,39	4,52
Rel_2	4,27	4,43	4,54
Rel_3	4,51	4,20	4,51
Rel_4	4,53	4,15	4,44

Table 4.
Reliability test

No	Data	Cronbach Alpha Value	Reliability
1	Perception Data (Servqual)	0,952	Reliable
2	Expectation Data (Servqual)	0,971	Reliable
3	Importance Data (Servqual)	0,968	Reliable
4	Functional Data (Canoee)	0,930	Reliable
5	Disfungsional Data (Canoee)	0,964	Reliable

3.4. Reliability test

Reliability testing will produce a Cronbach alpha value, which is then compared with the Cronbach alpha reliability coefficient criteria for reliable instruments. The instrument is declared reliable if the reliability coefficient is at least 0.6 [10]. The results of the data reliability test can be seen in Table 4.

3.5. Calculation of gap Servqual

The calculation of the gap score is carried out to determine the gap between the value of customer perceptions and the value of customer expectations. The gap score is obtained by subtracting the perception score from the expectation score [3]. The calculation of the gap score can be seen in Table 5.

Based on Table 5, the gap results of each attribute are obtained. A gap value that is negative is called a grade weakness, which is an attribute that has not met customer expectations. It is known that of the 15 attributes, there are 8 negative attributes which mean that what customers feel has not met customer expectations, so improvements must be made to the Go-ride service.

Table 5.
Calculation of gap Servqual

No	Attribute	Average Perception	Average Expectation	Gap	Grade
1	Res_1	4,12	4,45	-0,33	Weak
2	Res_2	4,06	4,34	-0,28	Weak
3	Res3	4,25	4,48	-0,24	Weak
4	As_1	4,56	4,37	0,19	Strong
5	As_2	4,55	4,31	0,24	Strong
6	Tg_1	4,03	4,37	-0,34	Weak
7	Tg_2	4,46	4,40	0,06	Strong
8	Tg_3	4,11	4,45	-0,34	Weak
9	Em_1	4,00	4,56	-0,56	Weak
10	Em_2	3,70	4,06	-0,36	Weak
11	Em_3	4,24	4,21	0,03	Strong
12	Rel_1	4,44	4,39	0,05	Strong
13	Rel_2	4,27	4,43	-0,16	Weak
14	Rel_3	4,51	4,20	0,31	Strong
15	Rel_4	4,53	4,15	0,37	Strong

Table 6.
Canoe category

Attribute	Canoe Category						(M + O + A) >< (I + R + Q)	Category
	M	O	A	I	R	Q		
1	24	48	6	19	0	0	78>19	O
2	19	38	19	21	0	0	76>21	O
3	31	47	5	14	0	0	83>14	O
4	41	38	6	12	0	0	85>12	M
5	31	27	14	23	2	0	72>25	M
6	18	40	12	27	0	0	70>27	O
7	20	22	25	30	0	0	67>30	I
8	14	45	16	22	0	0	75>22	O
9	39	37	4	17	0	0	80>17	M
10	21	31	19	25	1	0	71>26	O
11	42	33	8	14	0	0	83>14	M
12	19	38	26	14	0	0	83>14	O
13	13	11	38	35	0	0	62>35	A
14	46	23	4	24	0	0	73>24	M
15	39	39	6	13	0	0	84>13	M

Table 7.
Calculation of satisfaction and dissatisfaction

No	Attribute	Satisfaction	Dissatisfaction
1	Res_1	0,56	-0,74
2	Res_2	0,59	-0,59
3	Res3	0,54	-0,8
4	As_1	0,45	-0,81
5	As_2	0,43	-0,61
6	Tg_1	0,54	-0,6
7	Tg_2	0,48	-0,43
8	Tg_3	0,63	-0,61
9	Em_1	0,42	-0,78
10	Em_2	0,52	-0,54
11	Em_3	0,42	-0,77
12	Rel_1	0,66	-0,59
13	Rel_2	0,51	-0,25
14	Rel_3	0,28	-0,71
15	Rel_4	0,46	-0,8

3.6. *Canoe Model Creation*

The Canoe questionnaire contains both functional and dysfunctional statements. For example, Attribute 1 is that drivers are responsive to customer complaints. Functional being the driver is responsive to customer complaints, while dysfunctional being the driver is not responsive to customer complaints [11]. The results of the recapitulation of the Canoe questionnaire that has been categorized can be seen in Table 6.

Furthermore, the calculation of satisfaction and dissatisfaction is presented in Table 7. After calculating satisfaction and dissatisfaction, then make a Canoe quadrant. The Canoe quadrant can be seen in Fig. 2. From Fig. 2, it can be obtained that there are 6 attributes that fall into the Must Be category, 7 attributes of the One dimensional category, 1 attribute of the Attractive category, and 1 attribute of the Indifferent category.

3.7. *Calculation Servqual and Canoe integration*

The next stage is to determine the priority of attributes to be improved based on the calculation of the integration of Servqual and Canoe. The results of the Servqual and Canoe integration calculations which contain the priority order of the attributes to be improved are presented in Table 8 as follows [12].

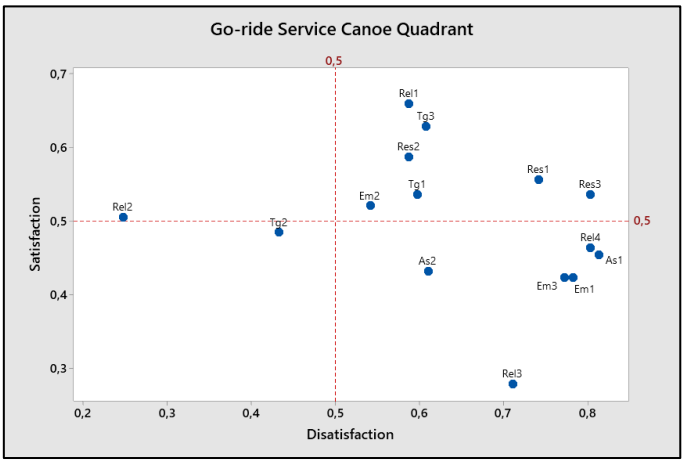

Figure 2. Canoe quadrant

Table 8.
Calculation Servqual and Canoe integration

Attribute Code	Grade	Category	Canoe Weight	Improvement Ratio$_{Adj}$	Adjusted Importance
Em_1	Weak	M	1	1,14	5,46
Em_2	Weak	O	2	1,05	4,88
Tg_3	Weak	O	2	1,04	4,84
Tg_1	Weak	O	2	1,04	4,81
Res_1	Weak	O	2	1,04	4,78
Res_2	Weak	O	2	1,03	4,73
Res_3	Weak	O	2	1,03	4,68
Rel_2	Weak	A	4	1,01	4,58
Rel_1	Strong	O	2	0,99	4,49
As_1	Strong	M	1	0,96	4,29
As_2	Strong	M	1	0,95	4,28
Em_3	Strong	M	1	0,99	4,23
Rel_3	Strong	M	1	0,93	4,20
Rel_4	Strong	M	1	0,92	4,08
Tg_2	Strong	I	0	0,00	0,00

Table 9.
Improvement attribute decision

Attribute Code	Adjusted Importance	Decision
Em_1	5,46	Improve
Em_2	4,88	Improve
Tg_3	4,84	Improve
Tg_1	4,81	Improve
Res_1	4,78	Improve
Res_2	4,73	Improve
Res_3	4,68	Improve
Rel_2	4,58	Improve
Rel_1	4,49	Maintain
As_1	4,29	Maintain
As_2	4,28	Maintain
Em_3	4,23	Maintain
Rel_3	4,20	Maintain
Rel_4	4,08	Maintain
Tg_2	0,00	Maintain

Next, sort the adjusted importance from largest to smallest. Attributes that are prioritized for improvement have criteria included in the grade weakness and category Canoe Must be, One dimensional and Attractive. The decision for each attribute to be improved or maintained is presented in Table 9 [11]. Based on Table 9, it can be obtained that there are 8 attributes that must be improved and 7 attributes that must be maintained. Furthermore, the 8 improved attributes will enter HoQ as customer requirements.

3.8. Creation of HoQ

The next stage is the creation of HoQ. The steps for creation HoQ are as follows:

a. Determination of technical response

Technical response is a stage to translate customer needs into technical requirements that have the objectives to be achieved by the company. The technical responses for Go-ride services can be seen in Table 10 [13].

b. Determination of technical correlation

The next step is to look for relationships between technical responses. Technical correlations are used to show the relationship between technical responses. This stage is to see whether the technical responses are interconnected or otherwise. In HoQ, technical correlation is symbolized (◎) for technical responses that have a strong positive relationship, symbol (○) for technical responses that have a moderate positive relationship, symbol (-) for technical responses that have no relationship, symbol (x) for technical responses that have a moderate negative relationship, and symbol (☆) for technical responses that have a moderate negative relationship [5]. An example of a positive relationship is if response 1 is applied it can improve the performance of response 2, and otherwise. Technical correlation can be seen in Fig. 3.

Table 10.
Technical responses

No	Attribute	Technical Responses
1	Drivers are always friendly and polite to customers	1. Give awards to drivers who can implement the SOP well 2. Organize training and sharing sessions for drivers
2	Drivers offer facilities to customers (helmets, masks, raincoats)	Provide helmets, masks, and raincoats for drivers
3	Drivers use complete driving attributes	1. Give awards to drivers who can implement the SOP well 2. Organize training and sharing sessions for drivers
4	Drivers use proper motorcycles	Conduct regular inspections for drivers
5	Drivers are responsive to customer complaints	1. Give awards to drivers who can implement the SOP well 2. Organize training and sharing sessions for drivers
6	Drivers are responsive to customer orders and requests	1. Give awards to drivers who can implement the SOP well 2. Organize training and sharing sessions for drivers
7	The company provides rates that are appropriate to the distance and affordable	Provide discounts for a certain time
8	Drivers deliver to the intended location through the best route.	Organize training and sharing sessions for drivers

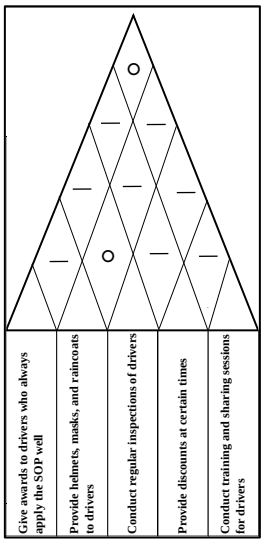

Figure 3. Technical correlation

Technical Response / *Voice of Customer (Servqual)* / *Customer Requirement*	Give awards to drivers who always apply the SOP well	Provide helmets, masks, and raincoats to drivers	Conduct regular inspections of drivers	Provide discounts at certain times	Conduct training and sharing sessions for drivers
Driver is always friendly and polite to customers	◎				○
Driver offers facilities to customers (helmets, masks, raincoats)	◎	◎			○
Driver uses complete driving attributes	◎				○
Drivers use proper motorcycles	◎		◎		○
Driver is responsive to customer complaints	◎				○
Driver is responsive to customer orders and requests	◎				○
Company provides rates that are appropriate to the distance and affordable				◎	
Driver delivers to the intended location through the best route					◎

Figure 4. Relationship

c. Determination of relationship

The next step is the relationship assessment which is carried out to determine the relationship between the technical response section and customer needs. Determination of this relationship is done by brainstorming with the gojek company. Relationship is symbolized (◎) for those with strong relationships with a score of 9, symbols (○) for those with moderate relationships with a score of 3 and symbols (-) for those with no relationship with a score of 0 [5]. Fig. 4 contains the results of determining the relationship with the company in determining the relationship between the technical response section and the customer needs it affects [14].

Table 11.
Planning matrix

No	Attribute	Sales Point	Improvement Ratio	Absolute Weight	Absolute Weight Percent	Priority
1	Em_1	1,5	1,14	9,33	15,30	1
2	Em_2	1,5	1,05	7,67	12,58	2
3	Tg_3	1,5	1,04	7,55	12,38	3
4	Tg_1	1,5	1,04	7,51	12,32	4
5	Res_1	1,5	1,04	7,45	12,21	5
6	Res_2	1,5	1,03	7,34	12,03	6
7	Res_3	1,5	1,03	7,22	11,83	7
8	Rel_2	1,5	1,01	6,93	11,37	8
			Total	61,00	100,0	

Table 12.
Technical matrix

No	Technical Responses	Relative Weight	Relative Weight Percent	Priority
1	Give awards to drivers who always apply the SOP well	691,22	51,03	1
2	Provide helmets, masks, and raincoats to drivers	113,18	8,36	3
3	Conduct routine inspections for drivers	110,84	8,18	4
4	Provide discounts at certain times	106,47	7,86	5
5	Organizing training and sharing sessions for drivers	332,71	24,57	2
	Total	1354,4		

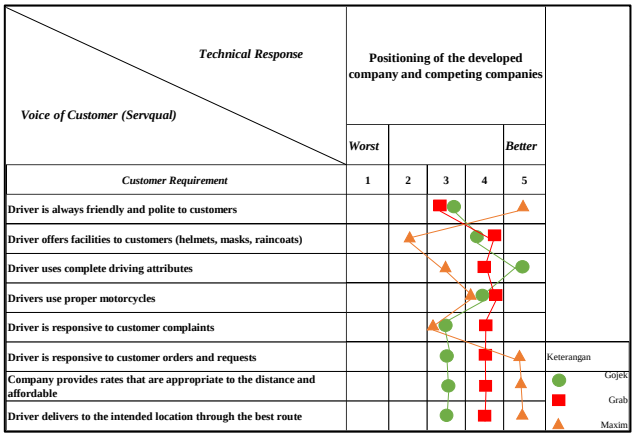

Figure 5. Benchmarking

d. Calculation of planning matrix

The next step is the calculation of the planning matrix obtained from the results of the questionnaire distributed to 97 respondents. Customer Satisfaction Performance is the value of the level of customer satisfaction from the questionnaire. The target value is the value of the customer's expectation level. The sales point value has the aim of seeing how much influence to sell products or services owned by the company based on customer needs that can be met. The sales point assessment has a predetermined value, namely the number 1 indicates that it does not benefit the company, the number 1.2 indicates if it is quite profitable for the company, and the number 1.5 indicates if it can benefit the company. Improvement ratio is obtained from the comparison between the target value and customer satisfaction performance then multiplied by the weight of the Canoe category. [5]. The results of the planning matrix calculation can be seen in Table 11 as follows.

e. Calculation of technical matrix

The next step is the calculation of the technical matrix which consists of relative weight and relative weight percent. Relative weight is obtained from the sum of the multiplication of absolute weight percent with the relationship score of each attribute. The results of the technical matrix calculation can be seen in Table 12 as follows [15].

f. Detremination of benchmarking matrix

The next step is determining benchmarking. Gojek's competitors who are the comparison in this study are Grab and Maxim. Each attribute is given a company position assessment score, namely 1 = very bad, 2 = bad, 3 = sufficient, 4 = good, and 5 = very good [9]. The benchmarking part of QFD can be seen in Fig. 5.

4. Conclusions

Upon calculating the Servqual gap value for the 15 attributes, it was found that 8 attributes failed to meet customer expectations. These include the driver's responsiveness to customer complaints and orders, the company's provision of affordable rates appropriate to the distance, the use of proper motorcycles by drivers, the adherence to complete driving attributes, the consistent friendliness and politeness of the driver towards customers, the provision of facilities to customers (helmets, masks, raincoats), and the driver's

efficiency in delivering to the intended location via the optimal route.

Prioritizing attributes for improvement based on the adjusted importance value revealed 8 attributes. These include the driver's consistent friendliness and politeness towards customers, offering facilities to customers (helmets, masks, raincoats), using complete driving attributes, employing proper motorcycles, responsiveness to customer complaints and orders, the company's provision of rates appropriate to the distance and affordability, and ensuring efficient delivery to the intended location via the optimal route.

Considering the relative weight percent value, the company's priority in improvement efforts should first focus on recognizing and awarding drivers who consistently adhere to standard operating procedures (SOPs). Secondarily, organizing training and knowledge-sharing sessions for drivers, providing essential gear like helmets, masks, and raincoats, conducting routine driver inspections, and offering specific time-bound discounts are further enhancement steps to consider.

Declaration statement

Dyah Lintang Trenggonowati: **Conceptualization, Methodology, Supervision, Visualization**. Maria Ulfah: **Resources, Validation**. Aurora Elvaretta Sukamto: **Writing - Review & Editing**.

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Data availability statement

The authors confirm that the data supporting the findings of this study are available within the article or its supplementary materials.

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